

# Knowledge, Attitude and Preventive Practices about Ebola Viral Disease among Journalists in Osogbo, Southwest Nigeria

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## ABSTRACT

The West African subregion presently faces the Ebola viral disease (EVD) epidemic. In order to control this epidemic, journalists need to inform the public. This study assessed their knowledge, attitude and preventive practices. A descriptive cross-sectional study was conducted among 93 journalists working in Osun State who completed a self administered questionnaire. Data collected was analysed. Mean (SD) age was 26.4±8.2 years ranging 18 to 49 years. Mean (SD) duration in practising journalism was 7.6±6.7 years (range, 1-20 years). Most had tertiary education (87.1%), were singles (74.2%), Christians (51%) and Yoruba (92.5%). Despite good knowledge (58.1%) of EVD, most had low risk perception (46.2%). The only statistical significant predictor of good knowledge was religion. In conclusion, most journalists have good knowledge but low risk perception. Efforts to improve the risk

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## 1. INTRODUCTION

Ebola virus disease (EVD) is a major public health problem associated with high case fatality rate. The Ebola virus was responsible for the recent largest, longest, most widespread EVD epidemic in the West African countries of Guinea, Sierra Leone, Liberia, Mali, Senegal and Nigeria [1, 2]. This epidemic was also reported in other countries such as Spain, United States of America mostly of health care workers with contact with affected West African countries [3, 4]. On August 8, 2014, World Health Organization (WHO) declared the epidemic as a Public Health Emergency of International Concern. It far outstrips other previous EVD epidemics that have been reported in other African countries such as Democratic Republic of Congo, Sudan, Gabon and Uganda. A common factor about the countries where the epidemic occurred was the high poverty level with largely destroyed or severely dysfunctional health care system due to conflicts and wars and inability to control this epidemic [2]. This disease is spread by specific situations from one human to another in hospitals with poor infection control mechanism, mortuaries through inappropriate handling of dead bodies and communities with lack or inadequate personal protective equipment with widespread ignorance about the mode of spread of this epidemic hinder its control and prevention [2].

Worldwide, the media are notable agents informing the general public about various topics under the sun [5]. While carrying out this task, some journalists at times misrepresents information gathered, get maimed or die while on duty [6-8]. Most Africans rely on the international media as their source of reliable information even on news and issues concerning the continent. This is mostly due to lack of latest

technology, poorly trained staff and inappropriate control of news agencies across the continents by governments who owned most of these agencies. Therefore, there is widely no independent news agency that can carry non adulterated news items without being controlled by these government agencies. EVD is highly fatal and has no cure. Also, local beliefs in witchcraft and fear worsen the ability to control and prevent further spread of the disease. This belief sometimes results in family members hiding an infected family member from the surveillance team and taking these infected people to traditional healers with patients avoiding treatment centres. The traditional burial practices encourage the spread of this disease from unsuspecting relatives from the corpse of their dead family member hence the need to change this dangerous funeral practices that involve close contact with infected dead relatives [2].

The role of the international media in informing the people about the Ebola viral disease (EVD) has sensitize the people and government worldwide leading to various attempts at prevention and control of the deadly disease [9-11]. However, since the local media largely depend on the international media for the news carried to their local audience, it is important to assess the knowledge of these local media practitioners to gauge the information available to the general populace. Despite the important role played by these journalists, few studies had assessed their knowledge attitude and preventive practices towards the EVD, hence, the need for this study.

## 2. MATERIALS AND METHODS

Osun State is located in the south-west part of Nigeria. It is home to several media houses which include the Nigeria Television Authority, the State owned Radio and Television stations and several private Radio and Television stations. Also, several print media practitioners work in the State. This cross-sectional study was conducted among journalists working in the print and mass media organisations in Osun State, Nigeria in the month of December 2015. All the journalists on duty during the study period in these media houses were approached to complete a pretested self administered questionnaire on their socio-demographic characteristics, knowledge, attitude and preventive practices to EVD. They were allowed to complete this questionnaire in their spare time. Questionnaire information was anonymised. Ethical approval to conduct this study was taken from the State Hospital Ethics and Research Committee. Written informed consent was taken from the respondents while they were reassured of the confidentiality of the information obtained. The data collected were entered and kept in a password protected computer.

The data obtained were analysed using SPSS version 16. Simple descriptive and inferential statistics were done. Knowledge score was computed for 18-item questions on knowledge of EVD. Each item was assigned “+1” for correct knowledge and “0” for incorrect knowledge. The knowledge score was graded as good or appropriate (if respondent scored  $\leq 10$  points) and not good or not appropriate (if score was  $> 10$  points) using the mean score as the break-off point. Test of significance was conducted using appropriate statistical methods. Multivariate analysis was performed using logistic regression to evaluate socio-demographic variables and other variables that are independently associated with good knowledge of EVD. Adjusted odd ratio (AOR) and 95% CI were presented and used as measures of the strength of association. Significant level was put at  $< 0.05$ .

## 3. RESULTS

A total of 93 journalists out of 102 approached completed the study. Mean (SD) age was  $26.4 \pm 8.2$  years ranging from 18 to 49 years. Mean (SD) duration in practising journalism was  $7.6 \pm 6.7$  years (range 1-20 years). Majority were young (87.1%), single (74.2%), had tertiary education (87.1%), Christians (50.5%), Yoruba (92.5%) and had 10 years and below length of employment (66.7%) as shown in Table 1.

Table 2 shows EVD awareness and source of awareness about the outbreak. Most respondents (88.2%) were aware of EVD epidemic in West Africa sub region with colleagues and radio as major sources of awareness. Figure 1 reports EVD knowledge among respondents. Majority (58.1%) had appropriate EVD knowledge. Table 3 reports knowledge of EVD clinical variables by respondents. Majority knows EVD viral aetiology (51.6%), mode of infection (68.8%), prevention (60.2%) and that EVD transmission will reduce with good personal and environmental hygiene (51.6%). Table 4 shows the respondents risk perception and attitude to EVD. Only 46.2% considered self to be at risk with 48.4% seeing fellow journalists at risk of EVD infection. About 42% felt that their workplace is protected from EVD infection with 58.1% wanting their workplace to have a written EVD control policy.

Table 1. Socio-Demographic Characteristics of Respondents

Variable	Frequency	%
Age group (years)		
18-35	81	87.1
>35	12	12.9
Marital status		
Single	69	74.2
Married	24	25.8
Level of education		
Secondary	12	12.9
Tertiary	81	87.1
Religion		
Christianity	47	50.5
Islam	46	49.5
Ethnicity		
Yoruba	86	92.5
Ibo	7	7.5
Duration of employment (years)		
≤10	62	66.7
>10	31	33.3

Table 2. EVD Awareness and Source of Awareness about the Outbreak

Variable	Frequency	%
Aware of the EVD epidemic in West Africa		
Yes	82	88.2
No	11	11.8
*Sources of awareness		
Colleagues	34	41.5
Radio	30	36.6
Newspapers	25	30.5
Internet	19	23.2
Television	16	19.5
Notice board/pamphlets	11	13.4

\*Multiple responses

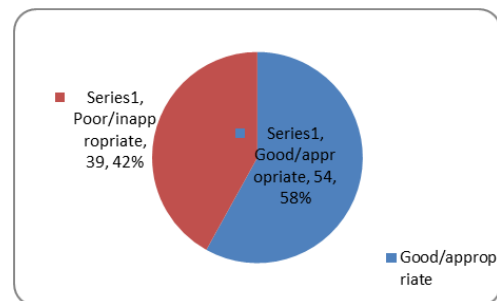


Figure 1. EVD knowledge among respondents

Table 3. Knowledge of EVD Clinical Variables

Variable	Frequency	%
Knows EVD is a viral disease		
Yes	48	51.6
No	45	48.4
Knows EVD clinical presentations		
Yes	42	45.2
No	51	54.8
Knows EVD has no cure		
Yes	42	45.2
No	51	54.8
Knows EVD mode of infection		
Yes	64	68.8
No	29	31.2
Knows how EVD can be prevented		
Yes	56	60.2
No	37	39.8
EVD transmission will reduce with good personal and environmental hygiene		
Yes	48	51.6
No	45	48.4
Suspected cases need special care in designated hospitals		
Yes	56	60.2
No	37	39.8

Table 4. Risk Perception and Attitude to EVD/Viral Hemorrhagic Fevers

Variable	Frequency	%
Consider self to be at risk		
Agree	43	46.2
Disagree	34	36.6
Undecided	16	17.2
Journalists are prone to EVD infection		
Agree	45	48.4
Disagree	30	32.3
Undecided	18	19.3
EVD cases should be quarantine		
Agree	74	79.6
Disagree	4	4.3
Undecided	15	16.1
My workplace is protected from EVD infection		
Agree	39	41.9
Disagree	44	47.3
Undecided	10	10.8
My workplace should have a written EVD control policy		
Agree	54	58.1
Disagree	27	29.0
Undecided	12	12.9

Table 5 shows respondents' preventive practices against EVD infection. Majority avoids eating bush meat since outbreak (70.7%), use personal protective equipment (70.7%). Some respondents eat bitter kola and salt (12.2%), avoid handshake with colleagues and other people (19.5%) and washing hands after touching sick people (45.1%). Table 6 shows the association between respondents' characteristics and EVD

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knowledge. Religion is the only characteristic that was statistically significant among respondents. Table 7 shows the logistic regression of respondents' characteristics and EVD knowledge. Religion is the only statistically significant characteristic that predicts good knowledge among respondents.

Table 5. Preventive Practices Against EVD/Viral Hemorrhagic Fevers Infection

Variable	Frequency (n=82)	%
Avoid eating bush meat since outbreak		
Yes	58	70.7
No	24	29.3
Eat bitter kola and salt to prevent EBV infection		
Yes	10	12.2
No	72	87.8
Use personal protective equipment to prevent infection		
Yes	58	70.7
No	24	29.3
Avoid handshake with colleagues and other people		
Yes	16	19.5
No	66	80.5
Hand washing after touching sick people		
Yes	37	45.1
No	45	54.9

Table 6. Association between Respondents' Characteristics and EVD Knowledge

Variable	Knowledge		$\chi^2$	p-value
	Appropriate (%)	Inappropriate (%)		
Age group (years)				
<36	46 (56.8)	35 (43.2)		0.518*
≥36	8 (66.7)	4 (33.3)		
Level of education				
Secondary	8 (66.7)	4 (33.3)		0.518*
Tertiary	46 (56.8)	35 (43.2)		
Marital status				
Single	36 (52.2)	33 (47.8)	3.810	0.051
Married	18 (75.0)	6 (25.0)		
Duration of employment (years)				
≤10	35 (56.5)	27 (43.5)	0.199	0.656
>10	19 (61.3)	12 (38.7)		
Religion				
Christianity	34 (72.3)	13 (27.7)	7.953	0.005
Islam	20 (43.5)	26 (56.5)		
Ethnicity				
Yoruba	52 (60.5)	34 (39.5)		0.126*
Ibo	2 (28.6)	5 (71.4)		

\*Fisher's exact test

Table 7. Logistic Regression of Respondents' Characteristics and EVD Knowledge

Variable	AOR	95%CI	p-value
Marital status			
Single	0.469	0.159-1.387	0.171
Married (ref)	1		
Ethnicity			
Yoruba	2.200	0.377-12.843	0.381
Ibo (ref)	1		
Religion			
Christianity	2.876	1.178-7.026	0.020
Islam (ref)	1		

#### 4. DISCUSSION

This study assessed EVD knowledge, attitude and preventive practices among journalists working in the print and mass media organizations in Osun State, Nigeria. Journalists are in the frontline in getting news to the general public hence are exposed to various people and places while performing this duty [7]. This puts

the journalist at risk in situations including diseases such as EVD [8,9]. It reported that most journalists were aware of the EVD epidemic in the West African sub-region with colleagues and radio as major sources of information. Previous studies on EVD had reported similar findings [11-13]. The fact that some journalists display ignorance of the EVD epidemic requires urgent attention.

Most respondents were young, single, had tertiary education, Christians and had 10 years and below length of employment. A previous study in this environment reported similar finding [14]. Since the respondents need good health to do their work, this study finding should inform policy direction towards prevention of this life threatening disease. Due to the nature of their work, if infected, they could spread the disease locally to unsuspecting fellow journalist/media practitioners, friends, family members, health care workers, other acquaintances and members of the community [10-14]. Hence, this population should be targeted by more studies assessing their EVD knowledge attitude and preventive practices to inform policy targeted at prevention and controlling EVD epidemic.

This study reported that although majority had good knowledge, some respondents had poor knowledge. This further reinforce that journalists need to undergo targeted education on EVD so as to improve their knowledge of this deadly disease. This study reported that the source of information on EVD for most journalists that participated was not the internet. This implies that journalists do not access information from reliable sources such as the internet. Hence the media organisations that employed these journalists need encouragement to provide internet facilities for their staff and encourage them to use it.

Most journalists display low risk perception as they neither see themselves nor their colleagues at risk of EVD. This negative attitude could lead to poor prevention preparedness and control of this deadly epidemic hence urgent action must be taken to put in place policies that will control and reduce the burden of the disease. The need to establish the EVD policy in the workplace will help to control this epidemic [11,14].

Although, some preventive practices such as handwashing had been proven to be effective in controlling the EVD epidemic, however, the use of bitter kola and salt require further investigation. The finding in this study that religion was the only socio-demographic factor that predict good knowledge needs further investigation. However, some religious practices have been proven to encourage spread of EVD such as performance of burial rites on patients that died from EVD [15-18].

This baseline study among Nigerian journalists is limited by its cross-sectional study design. Also, some respondents could have given socially acceptable answers to some questions despite assurances on the purpose of this study. It is however expected that this study will guide planning and implementing interventions targeted at controlling possible epidemics among this highly mobile study population.

## 5. CUNCLUSION

In conclusion, some journalists had inappropriate EVD knowledge. Efforts to improve the journalists' risk perception and public education focusing on the concept of universal precautions are required. Also, EVD control policy and emergency preparedness towards possible EVD epidemic is necessary.

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